



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,020	12/19/2005	Rihito Shoji	MAT-8794US / P38341-01	1280
52473	7590	09/27/2007	EXAMINER	
RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			LARKIN, DANIEL SEAN	
			ART UNIT	PAPER NUMBER
			2856	
			MAIL DATE	DELIVERY MODE
			09/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/595,020

Applicant(s)

SHOJI, RIHITO

Examiner

Daniel S. Larkin

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-19 is/are rejected.
- 7) ☒ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 19 December 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because of the following:

Reference box "53", as shown in Figure 4, should also be labeled

-- hydrogen humidifier --.

Reference box "54", as shown in Figure 4, should also be labeled

-- fuel cell --.

Reference box "56", as shown in Figure 4, should also be labeled

-- air humidifier --.

Reference box "57", as shown in Figure 4, should also be labeled

-- fuel cell control circuit --.

Reference box "25", as shown in Figure 7, should also be labeled

-- constant current source --.

Reference box "26", as shown in Figure 7, should also be labeled -- voltmeter --.

Reference box "27", as shown in Figure 7, should also be labeled

-- arithmetic unit --.

Art Unit: 2856

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

Reference numeral "115", as shown in Figure 5, does not appear within the written specification.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which Applicant may become aware in the specification.

6. The disclosure is objected to because of the following informalities:

Page 2, line 19: The article -- a -- should be inserted prior to the term "hydrogen".

Page 3, line 4: The article -- the -- should be inserted prior to the term "platinum".

Page 5, lines 1-8: This sentence does not make sense. It appears that some words may be missing or some words have not been used correctly.

Page 12, line 2: A -- comma -- should be inserted after the term "metal".

Page 12, line 3: A -- comma -- should be inserted after the term "steel".

Page 12, line 8: The numeral "10" should be corrected to read -- ten --.

Page 12, lines 13 and 15: The "hyphen" between the terms "not" and "shown" should be deleted.

Page 12, line 25: The term "Moist" should be corrected to read -- Moisture --.

Page 13, line 4: The term "moist" should be corrected to read -- moisture --.

Page 14, line 7: The article -- the -- should be inserted prior to the term "case".

Page 14, lines 11 and 16: The article -- a -- should be inserted prior to the term

"hydrogen".

Page 14, line 15: The term "that" should be corrected to read -- those --.

Page 14, line 19: A -- comma -- should be inserted after the term "sensor".

Page 14, line 20: A -- comma -- should be inserted after the term "piping".

Page 15, line 11: The article -- a -- should be inserted prior to the term

"hydrogen".

Page 15, line 12: A -- comma -- should be inserted after the term "leak".

Page 16, line 9: The "hyphen" between the terms "not" and "shown" should be deleted.

Page 16, line 12: The article -- a -- should be inserted prior to the term

"hydrogen".

Page 17, line 17: The phrase -- or smaller -- should be inserted after the value "1mA".

Page 17, line 22: The term "wait" should be corrected to read -- waits --.

Page 17, line 24: The numeral "2" should be corrected to read -- two --.

Page 18, line 15: Should the phrase "indicating the" be corrected to read -- representing --?

Page 20, line 2: The article "the" should be deleted.

Page 24, line 8: A -- comma -- should be inserted after the term "mixture".

Page 24, line 9: A -- comma -- should be inserted after the term "air".

Appropriate correction is required.

Claim Objections

7. Claims 1-19 are objected to because of the following informalities:

Re claim 1, claim line 2: The article -- a -- should be inserted prior to the term "detection".

Re claim 1, claim line 7: The phrase "the voltmeter" lacks antecedent basis.

Re claim 1, claim line 10: The article -- a -- should be inserted prior to the term "first".

Re claim 1, claim line 11: The article -- a -- should be inserted prior to the terms "second" and "third".

Re claim 1, claim line 19: The phrases "the second voltage" and "the third voltage" lack antecedent basis.

Re claim 4, claim line 2: The phrase "the difference" lacks antecedent basis.

Re claim 7, claim lines 1 and 2: The phrase "the difference" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 1, claim line 18: How does one obtain an ambient temperature

Art Unit: 2856

measurement from a voltage signal?

Allowable Subject Matter

10. The following is a statement of reasons for the indication of allowable subject matter:

Prior art was not relied upon to reject claims 1-19 because the prior art fails to teach and/or make obvious a gas sensor having an arithmetic unit which is configured to correct a second voltage and a third output from a voltmeter using an equation for correcting the second output value and the third output value based on the obtained ambient temperature and a zero-point output given from the voltmeter when only dry air exists, and an equation for correcting sensitivity of a heater element obtained in advance based on a known concentration of the detection target gas so as to obtain a first standardized output value for a second current and a second standardized output value for a third current in combination with all of the remaining limitations of the claim.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


The prior art to JP 2003-098147 (Shoji et al.) disclose a hydrogen sensor and an automobile using it.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Larkin whose telephone number is 571-272-2198. The examiner can normally be reached on 8:00 AM - 5:00 PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel Larkin
AU 2856
20 September 2007


DANIEL S. LARKIN
PRIMARY EXAMINER